

MATERIAL

m-1

Material Control:-

a) ABC Analysis:- classified in three categories:-

A - expensive material, small in no, form high cost in FG, maximum control (65%)

B - average cost; neither very high & very less; avg cost in FG, avg control (30%)

C - cheaper material - large in no, least part in FG, least/no control (5%)

Find:- % of cost to Total cost. then classify according to %.

b) Economic ^(EOQ) order quantity or Reorder quantity (ROQ):-

Total cost should be min. a) Trial & error method.

Total cost = Ordering cost + carrying cost + Purchase cost (may be same if no disc)

$$\text{Ordering cost} = \frac{A \cdot R}{OQ} \times \text{cost p.o.}$$

$$\text{Carrying cost} = \text{avg units} \times \text{c.c.p.u.}$$

\downarrow \downarrow

$\frac{1}{2} \cdot OQ$ purchase c.p.u. \times interest rate p.a.

b) Statistical method:-

$$EOQ = \sqrt{\frac{2AB}{c}}$$

A \rightarrow annual req

B \rightarrow ordering cost p.o.

C \rightarrow c.c.p.u per annum.

Check there must be

no. discount on bulk purchase)

* Frequency of order

no. of days after which order

$$= \frac{365}{\text{no. of orders}}$$

$$* \text{No. of deliveries} = \frac{A \cdot R}{OQ}$$

$$* \text{Total c.t. order} = \sqrt{2ABC}$$

c) Stock levels *

a) Reorder level:- $ROL = \text{max. cons per day/w/m} \times \text{max. lead time per d/w/m}$

b) Max. level stock:- $MLS = ROL + EOQ - [\text{min cons} \times \text{min lead time}]$

c) Minimum level stock:- $MLS = ROL - [\text{Avg cons} \times \text{avg LT}]$

d) Average level stock:- $ALS = \frac{ML + ROL}{2}$ or $= \text{min L} + \frac{1}{2} EOQ$

e) Safety stock:- Total cost (min) = Carrying cost + Loss of Profit (Probab \times stk outcost)

Material Pricing:-

a) landed cost of material = Purchase cost - (CIP - T.D) no cash disc + Packing charges (non refundable) + loading freight & forwarding chgs + Insurance in transit + duties & taxes (non refundable) + any other cost.

$$\text{Cost p.u} = \frac{\text{Total landed cost}}{\text{no. of good units}}$$

Material Pricing

Cost

- a) specific identification - sep books, sep A/c's.
- b) base stock method - min qty (fixed) + variable stk (LIFO or FIFO)
- c) LIFO
- d) FIFO

Averages

- a) Simple Avg
- b) weighted Avg.
- c) Periodic simple Avg
- d) Periodic wtd avg.
- e) moving simple Avg
- f) moving wtd Avg.

Market value

- a) Realizable value method.
- b) Replacement value.

Notional Price

- a) Std. Price.
- b) Inflated Price.
- c) Reuse Price.

danger level - Avg consumption per day \times LT - emergency order.